WE CLAIM:

1. A method for constitutive and/or inducible gene knock down in a vertebrate, or in a tissue culture or cells of a cell culture derived from a vertebrate, which comprises stably integrating an expression vector comprising a short hairpin RNA (shRNA) construct under control of a ubiquitous promoter into the genome of the vertebrate, of the tissue culture or of the cells of the cell culture.

2. The method of claim 1, wherein the expression vector is suitable for stabile integration into the genome of a vertebrate, or into the genome of the tissue culture or of cells of the cell culture.

3. The method of claim 1, wherein the expression vector contains homologous sequences suitable for integration at a defined genomic locus through homologous recombination in the genome of the vertebrate, in the genome of the tissue culture or in the genome of the cells of the cell culture including embryonic cells.

4. The method of claim 3, wherein the expression vector contains homologous sequences suitable for integration at a polymerase II dependent locus.

5. The method of claim 4, wherein the polymerase II dependent locus is selected from the group consisting of a Rosa26, collagen, RNA polymerase, actin and HPRT locus.

6. The method of claim 1, wherein the expression vector further contains functional sequences selected from the group consisting of splice acceptor sequences, polyadenylation sites, selectable marker sequences, etc.

7. The method of claim 1, wherein the ubiquitous promoter is selected from the group consisting of polymerase I, II and III dependent promoters.

8. The method of claim 7, wherein the ubiquitous promoter is a polymerase II or III dependent promoter.

9. The method of claim 7, wherein the ubiquitous promoter is selected from the group consisting of a CMV promoter, a CAGGS promoter, a snRNA promoter such as U6, a RNAse P RNA promoter such as H1, a tRNA promoter, a 7SL RNA promoter, a 5 S rRNA promoter, etc.

10. The method of claim 1, wherein the ubiquitous promoter is a constitutive promoter.

11. The method of claim 1, wherein the ubiquitous promoter is an inducible promoter.

12. The method of claim 11, wherein the inducible promoter is a promoter containing an operator sequence selected from the group consisting of tet, Gal4, lac, etc.

13. The method of claim 1, wherein said vertebrate is a non-human vertebrate.

14. The method of claim 13, wherein said vertebrate is a mouse or fish.

15. The method of claim 1, wherein the expression vector is a Pol III dependent promoter driven shRNA construct suitable to be integrated into a ubiquitously active Pol II dependent locus.

16. The method of claim 15, wherein the promoter is a constitutive H1 or U6 promoter.

17. The method of claim 15, wherein the promoter is an inducible U6 or H1 promoter.

18. The method of claim 1, wherein the expression vector is a Pol II dependent promoter driven shRNA construct suitable to be integrated into a ubiquitously active Pol II dependent locus.

19. The method of claim 18, wherein the promoter is an inducible CMV promoter.

20. The method of claim 1, wherein the shRNA comprises at least one DNA segment

A-B-C

wherein

A is a 15 to 35 bp DNA sequence with at least 95% complementarily to the gene to be knocked down;

B is a spacer DNA sequence having 5 to 9 bp forming the loop of the expressed RNA hair pin molecule, and

C is a 15 to 35 bp DNA sequence with at least 85% complementarily to the sequence A.

21. The method of claim 20, wherein A is a 19 to 29 bp DNA sequence.

22. The method of claim 20, wherein the DNA sequence A has 100% complementarily to the gene to be knocked down.

23. The method of claim 20, wherein C is a 19 to 29 bp DNA sequence.

24. The method of claim 1, wherein the shRNA comprises a stop and or polyadenylation sequence.

25. The method of claim 1, wherein the expression vector is integrated at a polymerase dependent locus of the living organism, tissue culture or cell culture.

26. The method of claim 1, wherein the method for constitutive and/or inducible gene knock down in a vertebrate comprises integrating the expression vector into ES cells of the vertebrate.

27. A vertebrate, or tissue or cell culture derived from a vertebrate having stably integrated, preferably at a polymerase II dependent locus of the vertebrate, tissue culture or cells of the cell culture, an expression vector comprising a short hairpin RNA (shRNA) construct under control of a ubiquitous promoter.

28. The vertebrate tissue or cell culture of claim 27, which is or is derived from a non-human vertebrate.

29. The vertebrate tissue or cell culture of claim 27, which is or is derived from a mouse or fish.

30. An expression vector comprising a short hairpin RNA (shRNA) construct under control of a ubiquitous promoter